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# MEMORANDUM

*Engineering Division*



December 30, 2002

**To:** Mike McNeely, City Engineer  
**Through:** Steve Erickson, Acting Design and Construction Engineer  
**From:** Gerry Krize, Sr. Public Works Inspector  
**Subject:** **Backup Information: South Bay Water Recycling Program (SBWRP)**  
**Project 8053 Change Orders.**

The following is being submitted as backup information for change orders to the SBWRP M-2/M-3 Contract:

CCO 19 Calaveras Bore: Lower the Grade of the 30" Casing Bore by five feet due to existing utilities being at different grades than shown on record drawings. (RFQ #26.3)

During construction it was found that the water and sewer lines in Calaveras Boulevard were not at the elevation shown on the record drawings. The bore needed to be lowered by five feet to clear the existing utilities. Due to the need for additional bore depth, a different type of trench shield system was required for safety. Instead of a trench shield shoring system, a slide rail shoring system was required. Also, extra excavation, off-haul of materials, de-watering costs, additional backfill and added fittings were needed. The cost for the extra work and materials is the total sum of \$59,463.88.

CCO 20 Angus Drive @ Dundee Avenue Extra Work (RFQ #27.3)

During construction it was discovered that an existing 12" storm drain lateral and utilities in a joint trench, located on Angus Drive east of Dundee Avenue, were lower than shown on the plans. Both of these utilities were in the planned alignment of the reclaimed water line construction. Therefore it was necessary to lower the alignment of the reclaimed waterline to go under these utilities. Heavy groundwater was encountered at the lower elevation. Due to the groundwater, trench walls caved in, generated extra excavation, pavement removal and replacement and off haul. Much of this work was required to be performed on overtime. The extra costs for this work was the total sum of \$62,464.70.

CCO 9 Tularcitos Bore (RFQ #33)

The plans required a bore under the Hetch Hetchy water main and Tularicitos Creek on Paseo Rufugio west of Hillview Drive. The tip of the bore auger hit a concrete

encasement under the Hetch Hetchy water line. The depth of the Hetch-Hetchy water line, and the street profile both were not as shown on the construction plans. It was necessary to stop the bore, remove the boring equipment, inspect the damage to the SFWD structure, grout-fill the bore, excavate the bore pit and receiving pit five feet deeper. Due to the need for the additional bore pit depth, a different type of trench shield system was required for safety. Instead of a trench shield shoring system originally used, a slide rail shoring system was required. The additional costs also include delay time, added backfill and fittings due to the additional depth. The total cost for this added work is \$169,723.00.

CCO 24 Los Coches Street/Hillview Drive Tie-in (RFQ 31.2):

The existing water and sewer lines at this location were lower than shown on the plans resulting in a conflict with the reclaimed water line in connection to the existing reclaimed waterline. The reclaimed water line was installed above the sewer and waterline to avoid the conflict. This change required restrained joints and slurry encasement and extra thrust blocks. The cost for this extra work is \$32,068.00

CCO 22 Unit Price Adjustment for Disposal of Contaminated Materials Requiring Class II Disposal (RFQ 29):

During construction, material was encountered that had to be disposed of in a Class II Landfill disposal site. This pay item includes the additional cost for disposal of excavated materials determined to be contaminated and requiring Class II disposal. Disposal of 4,158.58 cubic meters of excavated material was necessary at a cost of \$24.22 per cubic meter. The cost to dispose of this material includes a credit for disposal of non contaminated material. The total cost for disposal of this material is \$100,550.53.

Cc: City Manager, Public Works Inspector Kraynick.